6

TRACKPAD

iPro Ver. 4.0

Teacher's Manual

Extended Support for Teachers

ORANGE
www.orangeeducation.in
www.thetouchpad.com

Teacher's Time Table

Periods / Days	0	I	II	III	IV	BREAK	V	VI	VII	VIII
Monday										
Tuesday										
Wednesday										
Thursday										
Friday										
Saturday										

Development Milestones in a Child

Development milestones are a set of functional skills or age-specific tasks that most children can do at a certain age. These milestones help the teacher identify and understand how children differ in different age groups.

Age 5 - 8 Years	
Physical	• First permanent tooth erupts • Shows mature throwing and catching patterns • Writing is now smaller and more readable • Drawings are now more detailed, organised and have a sense of depth
Cognitive	• Attention continues to improve, becomes more selective and adaptable • Recall, scripted memory, and auto-biographical memory improves • Counts on and counts down, engaging in simple addition and subtraction • Thoughts are now more logical
Language	• Vocabulary reaches about 10,000 words • Vocabulary increases rapidly throughout middle childhood
Emotional/Social	• Ability to predict and interpret emotional reactions of others enhances • Relies more on language to express empathy • Self-conscious emotions of pride and guilt are governed by personal responsibility • Attends to facial and situational cues in interpreting another's feelings • Peer interaction is now more prosocial, and physical aggression declines

"If you cannot do great things, do small things in a great way."

Age 9 - 11 Years	
Physical	• Motor skills develop resulting enhanced reflexes
Cognitive	• Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	• Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/Social	• Self-esteem tends to rise • Peer groups emerge

Age 11 - 20 Years	
Physical	• If a girl, reaches peak of growth spurt • If a girl, motor performance gradually increases and then levels off • If a boy, reaches peak and then completes growth spurt • If a boy, motor performance increases dramatically
Cognitive	• Is now more self-conscious and self-focused • Becomes a better everyday planner and decision maker
Emotional/Social	• May show increased gender stereotyping of attitudes and behaviour • May have a conventional moral orientation

Managing the children's learning needs according to their developmental milestones is the key to a successful teaching-learning transaction in the classroom.

"Family is the most important thing in the world."

Teaching Pedagogies

Pedagogy is often described as the approach to teaching. It is the study of teaching methods including the aims of education and the ways in which such goals can be achieved.

Lesson Plans

A lesson plan is the instructor's road map which specifies what students need to learn and how it can be done effectively during the class time. A lesson plan helps teachers in the classroom by providing a detailed outline to follow in each class.

A lesson plan addresses and integrates three key components:

- Learning objectives
- Learning activities
- Assessment to check the student's understanding

A lesson plan provides an outline of the teaching goals:

Before the class:

1. Identify the learning objectives.
2. Plan the lesson in an engaging and meaningful manner.
3. Plan to assess student's understanding.
4. Plan for a lesson closure.

↓

During the class:

Present the lesson plan.

↓

After the class:

Reflect on what worked well and why. If needed, revise the lesson plan.

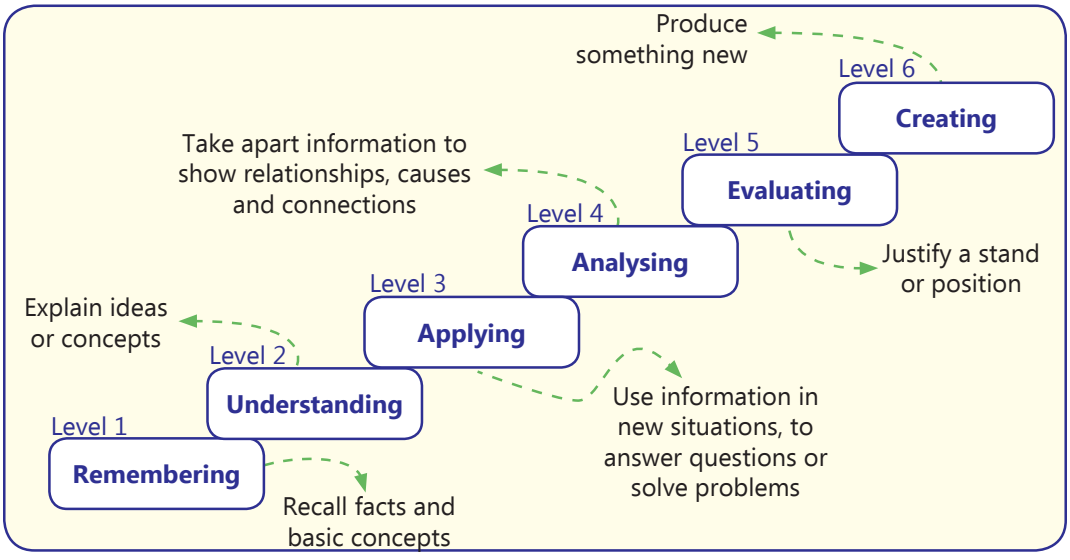
"Knowing yourself is the beginning of all wisdom."

Teaching Strategies

Numerous strategies have evolved over the years to facilitate the teaching-learning process in the classrooms.

Bloom's Taxonomy

Bloom's Taxonomy was created by **Dr Benjamin Bloom** and several of his colleagues, to promote higher forms of thinking in education instead of rote learning. There are three domains of learning: cognitive (mental), affective (emotional), and psychomotor (physical). However, when we refer to Bloom's Taxonomy we speak of the cognitive domain. Bloom's Taxonomy is a list of cognitive skills that is used by teachers to determine the level of thinking their students have achieved. As a teacher, one should attempt to move students up the taxonomy as they progress in their knowledge.



Teachers should focus on helping students remember information before expecting them to understand it, helping them understand it before expecting them to apply it to a new situation, and so on.

"If you have no confidence in self, you are twice defeated in the race of life."

Class 6

Lesson Plan

iPlus Ver 2.0

1. Categories of Computers and Computer Languages

Teaching Objectives

Students will learn about

- ☞ Categories of computers
- ☞ Computer languages
- ☞ Working of language translators
- ☞ Some other special computers
- ☞ Language translator

Number of Periods

2

Teaching Plan

While teaching this chapter, tell the students that how computers are classified on basis of their

- Type
- Purpose
- Size, speed, processing power and price

Tell the students about classification of computers on basis of their type or functioning:

- Analog Computers
- Digital computers
- Hybrid computers

Explain to the students about classification of computers on basis of their purpose:

- General purpose computers
- Special purpose computers

Tell the students about classification of computers on basis of their size, speed and processing power:

- Microcomputers such as Desktop, Laptop, Tablet, etc.
- Minicomputer like PDP-11, PDP-8, HP-3000 etc.
- Mainframe computer such as IBM zSeries, IBM 4381, ICL 39, etc.
- Supercomputers like Pace, Titan, Sunway TaihuLight, Mihir, etc.

Share with the students the importance and usefulness of some other special computers:

- Embedded computers like Digital camera, ATM, Microwave, etc.
- Handheld computers like Smartphone, PDA, Smart watch, Gaming consoles, etc.

Give a brief account of different computer languages:

- Low level languages such as Machine language and Assembly language.
- High level language such as 3GL, 4GL and 5GL.

Tell the students about advantages and disadvantages of HLL.

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Explain to the students about the concept of language translator and its working.

Explain to the students that assembler, compiler and interpreter are three main types of language translator.

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. Name some ways in which computers are classified.
Q. What is a minicomputer?
Q. What is a microcomputer?
Q. Differentiate between analog and digital computers?
Q. What are mainframe computers? What are they used for?
Q. How many generations of computers languages are there?
Q. Give three characteristic features of Third / Fourth / Fifth generation of computer languages.
Q. What is a computer language?
Q. What are three main types of language translator?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 16 and 17 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on page 17 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Practical Time given on page 18 of the main course book will enhance the ability of the students and serve as a digital literacy activity.

Suggested Activity

Ask the students to prepare a collage of different models of computers classified on the basis of size, speed and processing power.

2. File Management—Organisation of Data

Teaching Objectives

Students will learn about

- Copying or moving files/folders
- Searching for files or folders
- Different file formats
- Sorting of files/folders
- Using multiple applications

Teaching Plan

While teaching this chapter, tell the students that how computers work on data and how data in a computer can be arranged in the form of files or folders.

Number of Periods	
Theory	Practical
2	2

IMPRINT 1

- Copying files/folders from one drive to another drive
- Moving files/folders from one drive to another drive
- Copying files/folders from one device to another device
- Copying file or folder from a pen drive to computer

Tell the students about sorting of files and different ways in which files and folders can be arranged in a computer.

- Sorting of files – Sorting by name, Sorting by size, Sorting by type, Sorting by date of creation or modification.

Explain to the students about searching of files or folders:

- Searching of files using windows explorer
- Searching for a file using wildcard characters – Searching of files using asterisk (*), Searching of files using question mark (?)

Tell the students about using multiple applications in windows.

Explain to the students about different file formats used in windows.

- JPEG
- MP4
- MP3
- DOCX
- XLSX
- PPTX

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. Explain how data can be arranged in a computer.

Q. What is the procedure to copy files from one drive to another drive?

Q. What is the difference between copying and moving a file/folder?

Q. What is the procedure to copy file/folder using a pen drive to computer?

Q. What do you mean by sorting of files? What are some ways in which data can be sorted?

Q. How many ways are there to search a file or folder using wildcard characters?

Q. Explain following file formats:

- JPEG
- MP4
- DOCX
- XLSX
- PPTX

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 28, 29 and 30 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on page 30 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Practical Time given on page 30 of the main course book will enhance the ability of the students and serve as a digital literacy, collaboration and teamwork activity.

Suggested Activity

Ask the students to explore different drives in their computers (under teachers or parents supervision) and sort files according to:

- File type
- Date
- Name

IMPRINT 1

3. Word Processor—Tabular Representation

Teaching Objectives

Students will learn about

- ☞ Inserting a table
- ☞ Selecting cells, rows, columns and table
- ☞ Deleting rows or columns
- ☞ Merging cells
- ☞ Moving and resizing tables
- ☞ Table styles
- ☞ Entering data in a table
- ☞ Inserting rows or columns
- ☞ Changing column width and row height
- ☞ Splitting cells
- ☞ Applying borders and shading
- ☞ Aligning text in a table

Teaching Plan

Number of Periods	
Theory	Practical
2	3

While teaching this chapter, tell the students that a table is an arrangement of text in the form of columns and rows.

Also tell them that an intersection of a row and a column is called a cell.

Demonstrate to the students the method of inserting a table and entering data in a table in a Word document.

Show to the students how to select a cell, a group of cells, a row, a column or the whole table.

Demonstrate to the students the steps to:

- Add more rows to a table
- Delete rows from a table
- Add more columns to a table
- Delete columns from a table
- Change width of a column
- Change height of a row

Introduce merging of cells as combining two or more cells in the same row or the same column into a single cell.

Show to the students the steps to merge two or more cells. Introduce splitting of cells as dividing one cell into two or more cells, Show to the students the steps to split a cell.

Demonstrate to the students the steps to move a table and resize a table. Tell the students that Word 2016 allows to apply borders to tables and cells as well as to shade the cells and table.

Make the students understand that Word offers some built-in formats as Table Styles to apply to a table.

Make the students understand how to align the text in a table.

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What is a table?

Q. Define a cell.

Q. What is the shape of the mouse pointer selecting a cell / row / column / table?

Q. Can more rows or columns be added to a table?

Q. Define merging/splitting of cells.

Q. What is the difference between moving a table and resizing a table?

Q. What is the use of Table Styles feature of Word 2016?

Q. What is text alignment?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 39 and 40. of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on page 40 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Practical Time given on pages 40 and 41 of the main course book will enhance the ability of the students and serve as a creativity and innovativeness, experiential learning activity.

Suggested Activity

Ask the students to create a comparative mark sheet for your marks in different subjects for last three classes.